Notice No. 12

Rules and Regulations for the Classification of Ships, July 2014

The status of this Rule set is amended as shown and is now to be read in conjunction with this and prior Notices. Any corrigenda included in the Notice are effective immediately.

Issue date: May 2015

Amendments to	Effective date
Part 5, Chapter 6, Section 3	1 July 2015
Part 5, Chapter 8, Section 2	1 July 2015

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Part 5, Chapter 6

Main Propulsion Shafting

Effective date 1 July 2015

■ *Section 3* **Design**

3.1 Intermediate shafts

3.1.4 For shrink fit couplings *k* refers to the plain shaft section only. Where shafts may experience vibratory stresses close to the permissible stresses for continuous operation, an increase in diameter to the shrink fit diameter is to be provided, e.g. a diameter increase of 1 to 2 per cent and a blending radius as described in ~~3.8~~ 3.7.

3.1.6 The application of k = 1,20 is limited to shafts with longitudinal slots having a length ~~of not more~~ less than $0{,}8d_o$ and a width ~~of not more~~ greater than ~~$0{,}1d$~~ $0{,}15d_o$ and a diameter of central hole d_i of ~~not more~~ less than ~~$0{,}8d$~~ $0{,}7d_o$, *see* ~~3.7~~ 3.6. The end rounding of the slot is not to be less than half the width. An edge rounding should preferably be avoided as this increases the stress concentration slightly. The values of c_K, *see* Table 8.2.1 in Pt 5, Ch 8, are valid for 1, 2 and 3 slots, i.e. with slots at 360, 180 and 120 degrees apart respectively.

Part 5, Chapter 8

Shaft Vibration and Alignment

Effective date 1 July 2015

■ *Section 2* **Torsional vibration**

2.4 Symbols and definitions

2.4.4 For a longitudinal slot C_k = 0,3 is applicable within the dimension limitations given in Pt 5, Ch 6,3.1.6. If the slot dimensions are outside these limitations, or if the use of another C_k is desired, the actual stress concentration factor (*scf*) is to be documented or determined from 2.4.5 or by direct application of FE calculation, in which case:

$$C_k = \frac{1{,}45}{scf}$$

Note that the *scf* is defined as the ratio between the maximum local principal stress and $\sqrt{3}$ times the nominal torsional stress (determined for the bored shaft without slots).

(*Part only shown*)
2.4.5 **Stress concentration factor of slots**. The stress concentration factor (*scf*) at the ends of slots can be determined by means of the following empirical formulae:

where, in this context,
e = hole diameter, in mm (this is independent of slot width)

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